

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled).
2. (Currently Amended) A method of providing hematopoietic stem cells to a subject comprising the steps of:

administering a ~~TPO~~ thrombopoietin (TPO) mimetic compound to a subject to ~~enhance expansion of a stem cell population within bone marrow and/or mobilize stem cells in peripheral circulation~~ increase stem cells in said subject;

~~harvesting one or more of the bone marrow stem cells or the stem cells in the peripheral circulation; and;~~

treating said subject with a bone marrow ablative treatment; and

transplanting the harvested stem cells into the subject;

wherein the TPO mimetic compound has the following sequence:

I E G P T L R Q (2-Nal) L A A R X<sub>10</sub>

wherein (2-Nal) is  $\beta$ -(2-naphthyl)alanine and X<sub>10</sub> is Sar.

3. (Previously Amended) The method of claim 2, wherein the subject is a human.
4. (Original) The method of claim 2, wherein the one or more stem cells are cryopreserved after harvesting.
5. (Original) The method of claim 4, wherein the one or more cryopreserved stem cells are thawed and determined to be viable prior to transplanting the stem cells into the subject.
6. (Original) The method of claim 4, wherein the one or more stem cells are transplanted into the subject when the subject is in need of such transplantation.
7. (Previously Amended) The method of claim 2, wherein the TPO mimetic compound has reduced immunogenicity relative to one or more of rhTPO and rhIL-11.
8. (Currently Amended) The method of claim 2, wherein the TPO mimetic compound has an improved PK ~~pharmacokinetic~~ pharmacokinetic profile relative to one or more of rhTPO and rhIL-11.

9. (Currently Amended) A method of reducing a time to engraftment following reinfusion of stem cells in a subject comprising the steps of:

administering a ~~TPO~~thrombopoietin (TPO) mimetic compound to the subject;  
~~enhancing the expansion of the stem cell population within bone marrow and/or mobilizing the increasing stem cells in peripheral circulation~~said subject;  
harvesting one or more of ~~the bone marrow stem cells or one or more of the stem cells in the peripheral circulation;~~ and;  
treating said subject with a bone marrow ablative treatment; and  
transplanting the one or more harvested stem cells into the subject,  
wherein the TPO mimetic compound has the following sequence:

I E G P T L R Q (2-Nal) L A A R X<sub>10</sub>

wherein (2-Nal) is  $\beta$ -(2-naphthyl)alanine and X<sub>10</sub> is Sar.

10. (Currently Amended) A method of reducing the incidence of delayed primary engraftment comprising the steps of:

administering a ~~TPO~~thrombopoietin (TPO) mimetic compound to the subject;  
~~enhancing the expansion of the stem cell population within bone marrow and/or mobilizing the increasing stem cells in peripheral circulation~~said subject;  
harvesting one or more of ~~the bone marrow stem cells or one or more of the stem cells in the peripheral circulation;~~ and;  
treating said subject with a bone marrow ablative treatment; and  
transplanting the one or more harvested stem cells into the subject,  
wherein the TPO mimetic compound has the following sequence:

I E G P T L R Q (2-Nal) L A A R X<sub>10</sub>

wherein (2-Nal) is  $\beta$ -(2-naphthyl)alanine and X<sub>10</sub> is Sar.

11. (Currently Amended) A method of reducing the incidence of secondary failure of platelet production comprising the steps of:

administering a ~~TPO~~thrombopoietin (TPO) mimetic compound to the subject;  
~~enhancing the expansion of the stem cell population within bone marrow and/or~~  
~~mobilizing the increasing stem cells in peripheral circulation~~said subject;  
~~harvesting one or more of the bone marrow stem cells or one or more of the stem cells~~  
~~in the peripheral circulation; and;~~  
treating the subject with a bone marrow ablative treatment; and  
transplanting the one or more harvested stem cells into the subject,  
wherein the TPO mimetic compound has the following sequence:

I E G P T L R Q (2-Nal) L A A R X<sub>10</sub>

wherein (2-Nal) is  $\beta$ -(2-naphthyl)alanine and X<sub>10</sub> is Sar.

12. (Currently Amended) A method of reducing the time of platelet and/or neutrophil engraftment following reinfusion of stem cells in a subject comprising the steps of:

administering a ~~TPO~~thrombopoietin (TPO) mimetic compound to the subject;  
~~enhancing the expansion of the stem cell population within bone marrow and/or~~  
~~mobilizing the increasing stem cells in peripheral circulation~~said subject;  
~~harvesting one or more of the bone marrow stem cells or one or more of the stem cells~~  
~~in the peripheral circulation; and;~~  
treating the subject with a bone marrow ablative treatment; and  
transplanting the one or more harvested stem cells into the subject,  
wherein the TPO mimetic compound has the following sequence:

I E G P T L R Q (2-Nal) L A A R X<sub>10</sub>

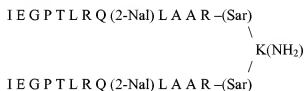
wherein (2-Nal) is  $\beta$ -(2-naphthyl)alanine and X<sub>10</sub> is Sar.

13. Canceled.

14. Canceled.

15. (Currently Amended) The method of claim 44~~2~~, wherein said TPO mimetic compound is covalently attached to a hydrophilic polymer.

16. (Previously Presented) The method of claim 15, wherein said hydrophilic polymer has an average molecular weight of between about 500 to about 40,000 daltons.
17. (Previously Presented) The method of claim 16, wherein said hydrophilic polymer has an average molecular weight of between about 5,000 to about 20,000 daltons.
18. (Previously Presented) The method of claim 17, wherein said hydrophilic polymer has an average molecular weight of about 20,000 daltons.
19. (Previously Presented) The method of claim 15, wherein said polymer is polyethylene glycol.
20. (Previously Presented) The method of claim 2, wherein the TPO mimetic compound has the following formula:



wherein (2-Nal) is  $\beta$ -(2-naphthyl)alanine and (Sar) is sarcosine.

21. (Previously Presented) The method of claim 20, wherein said TPO mimetic compound is covalently attached to a hydrophilic polymer.
22. (Previously Presented) The method of claim 21, wherein said hydrophilic polymer has an average molecular weight of between about 500 to about 40,000 daltons.
23. (Previously Presented) The method of claim 22, wherein said hydrophilic polymer has an average molecular weight of between about 5,000 to about 20,000 daltons.
24. (Previously Presented) The method of claim 23, wherein said hydrophilic polymer has an average molecular weight of about 20,000 daltons.
25. (Previously Presented) The method of claim 21, wherein said polymer is polyethylene glycol.
26. (Previously Presented) The method of claim 20, wherein each of the dimeric subunits of said TPO mimetic compound is covalently attached to a hydrophilic polymer.

27. (Previously Presented) The method of claim 26, wherein said hydrophilic polymer has an average molecular weight of between about 500 to about 40,000 daltons.
28. (Previously Presented) The method of claim 27, wherein said hydrophilic polymer has an average molecular weight of between about 5,000 to about 20,000 daltons.
29. (Previously Presented) The method of claim 28, wherein said hydrophilic polymer has an average molecular weight of about 20,000 daltons.
30. (Previously Presented) The method of claim 26, wherein said polymer is polyethylene glycol.

Please add claims 31-34 as follows:

31. (New) The method of claim 2, wherein said stem cells are within said subject's bone marrow.
32. (New) The method of claim 2, wherein said stem cells are within said subject's peripheral circulation.
33. (New) The method of claim 2, wherein said subject is treated with chemotherapy.
34. (New) The method of claim 2, wherein said subject is treated with radiation therapy.